

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An electron beam processing method for processing an organic material film formed on a surface of an object to be processed by using an electron beam,

wherein the electron beam is irradiated onto the organic material film through a hydrocarbon radical generating gas, a partial pressure of which is greater than or equal to 0.1 Torr.

Claim 2 (Original): The method of claim 1, wherein the hydrocarbon radical generating gas is a low molecular weight hydrocarbon-based gas.

Claim 3 (Canceled).

Claim 4 (Original): The method of claim 2, wherein the low molecular weight hydrocarbon-based gas is a methane gas.

Claim 5 (Original): The method of claim 1, wherein the organic material film has a low dielectric constant.

Claim 6 (Original): The method of claim 1, wherein the organic material film is made of an organic silicon compound.

Claim 7 (Currently Amended): An electron beam processing apparatus comprising:  
a hermetically structured processing chamber;

a mounting table disposed inside the processing chamber for mounting thereon an object to be processed having an organic material film formed on a surface thereof;

a plurality of electron beam tubes disposed above the mounting table;

a gas supply unit for supplying a hydrocarbon radical generating gas into the processing chamber; and

a depressurization unit for reducing an inner pressure of the processing chamber, wherein the electron beam tubes irradiate electron beams onto the organic material film through the hydrocarbon radical generating gas, and

wherein a partial pressure of the hydrocarbon radical generating gas is set to be greater than or equal to 0.1Torr.

Claim 8 (Original): The apparatus of claim 7, wherein the hydrocarbon radical generating gas is a low molecular weight hydrocarbon-based gas.

Claim 9 (Canceled).

Claim 10 (Currently Amended): The ~~method~~ apparatus of claim 8, wherein the low molecular weight hydrocarbon-based gas is a methane gas.

Claim 11 (Canceled).

Claim 12 (Original): The apparatus of claim 7, wherein the organic material film has a low dielectric constant.

Claim 13 (Original): The apparatus of claim 7, wherein the organic material film is made of an organic silicon compound.